

**YANK SPRINGS, YANK CREEK, AND
MESTEÑO SPRING ENCLOSURES AND
WATER DEVELOPMENT**

ENVIRONMENTAL ASSESSMENT

EA OR-025-02-29

**Three Rivers Resource Area
Bureau of Land Management
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YANK SPRINGS, YANK CREEK, AND MESTEÑO SPRING ENCLOSURES AND WATER DEVELOPMENT

ENVIRONMENTAL ASSESSMENT EA OR-025-02-29

CHAPTER I. INTRODUCTION: PURPOSE OF AND NEED FOR ACTION

A. Introduction

As a result of the Steens Mountain Cooperative Management and Protection Act (Steens Act) of 2000 the Bureau of Land Management (BLM) recently acquired Yank Springs and a portion of Yank Creek from private ownership. The newly-acquired property is located approximately 11 miles southeast of Diamond, Oregon, about one-half mile southeast of the Kiger Mustang Overlook in the Smyth-Kiger Grazing Allotment (refer to Map A), and is managed by Three Rivers Resource Area, Burns District, BLM. The property is also within the Kiger Wild Horse Herd Management Area (HMA) and the Kiger Mustang Area of Critical Environmental Concern (ACEC) (refer to Map B).

Yank Springs, Yank Creek, and Mesteno Spring (located near Yank Springs) have historically received heavy use from wild horses and livestock which has degraded riparian and aquatic resources. The BLM, in conformance with the Three Rivers Resource Area Management Plan of 1992 (WHB 2.4, Page 2-45; GM 1.3, Page 2-36), Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Public Lands Administered by the BLM in the States of Oregon and Washington (Pages 9, 11, 13, 14, 17), the Smyth-Kiger Allotment Management Plan of 1995 (Page 1), the Riddle Mountain and Kiger Wild Horse Herd Management Area Plan (Page 4), and the Kiger Mustang ACEC Management Plan of 1996 (Page 2), is proposing to construct range improvement projects designed to protect and improve the riparian and aquatic resources at Yank Springs, Yank Creek, and Mesteno Spring, while providing water for wild horses and livestock. The proposed action is also consistent with State and local government plans and laws. The following analysis will be used to determine which of the alternatives presented in this document would most benefit the biological needs of Yank Springs, Yank Creek, and Mesteno Spring, while providing for multiple uses of the resource.

B. Purpose of and Need for Action

Historically, wild horses, livestock, and big game have had unrestricted access to the springs and creek at the proposed project site. Over time the springs and creek have become degraded, riparian vegetation was over utilized and bare soil exposed. This unique area is to be managed under the Steens Act which directs the BLM to maintain the cultural, economic, ecological, and social health of the Steens Mountain Area.

The Steens Act further states that the area should maintain and enhance cooperative and innovative management practices between public and private land managers, to promote viable and sustainable grazing and recreation operations on private and public lands, as well as to conserve, protect, and manage for healthy watersheds and the long-term ecological integrity of Steens Mountain. Therefore, in the spirit of the Steens Act, action is needed to protect riparian and aquatic resources at Yank Springs, along a portion of Yank Creek, and at Mesteño Spring, while providing drinking water for wild horses and livestock. An interdisciplinary team has developed several alternatives requiring minimal maintenance and providing stream and riparian protection while meeting multiple-use resource needs.

CHAPTER II. ALTERNATIVES INCLUDING THE PROPOSED ACTION

A. No Action Alternative

Under the No Action Alternative, wild horses and livestock would continue to congregate at the springs and along the creek, slowing or preventing the rate of riparian and aquatic resource recovery. Current fence and watering locations would remain the same (refer to Map C). The No Action Alternative would not change movement or use patterns of wild horses, livestock or big game in the area.

B. Spring Development Alternative

The Spring Development Alternative would involve relocating and removing existing fences, construction of two exclosure fences, and developing one spring.

One of the exclosures would be approximately 250 acres in size and would include Yank Springs, a portion of Yank Creek, and some surrounding uplands. Yank Springs would be developed to provide off-site water for wild horses and livestock in two pastures by way of a gravity-fed water delivery system. A second exclosure would be constructed to protect up to 40 acres around Mesteño Spring. Refer to Map D for the location of the water development, exclosures, and relocated fences discussed in the Spring Development Alternative.

C. Proposed Action Alternative

The Proposed Action Alternative would involve relocating or removal of some existing fences, construction of an exclosure around Yank Springs and Yank Creek, and one smaller exclosure around Mesteño Spring. The larger exclosure would include two water gaps located along Yank Creek which wild horses and livestock could access from both the Yank Springs and Ruins Pastures. These water gaps would be designed to prevent livestock movement across the creek while allowing access to free running water. Refer to Map E for the design.

The large enclosure (up to 250 acres) would include Yank Springs, a portion of Yank Creek, and some surrounding uplands. A second enclosure would protect up to 2 acres around Mesteño Spring.

D. Actions Considered But Not Developed

During development of this document one alternative was discussed which was determined to be unable to meet the stated purpose and need. This alternative which is not analyzed in this document was as follows:

1. Construct enclosure fences and install a pump to move water to troughs located away from the springs and creek. This alternative was not analyzed further because it would require frequent and costly maintenance and was determined to not be reliable.

E. Project Design and Mitigation (Spring Development Alternative)

1. The headbox and pipelines would be installed utilizing mechanized excavation equipment. Equipment would be allowed to clear vegetation as necessary to properly set the headbox and excavate trenches for pipelines, install pipes, and backfill the headbox hole and pipeline trenches. After cleanup is complete, the lines would be seeded with a native seed mix and any brush removed during excavation would be placed over the lines to help in erosion control.
2. Surface disturbance would be limited to an area of 10 feet in total width for pipeline installation. Surface disturbance for placement and leveling of trough locations would be limited to 100 feet by 50 feet.
3. Troughs would be placed on runway metal or similar material, to reduce soil erosion and compaction.
4. Green troughs would be purchased to meet BLM Visual Resource Management (VRM) specifications.
5. Pipes would be buried.
6. Troughs would be equipped with wildlife escape devices. The grazing permittee would be responsible for maintaining these devices.
7. Pipelines and troughs would remain full and functional for wild horses and wildlife when livestock are not in the pastures.

8. Cultural resource and Special Status plant inventories would be conducted prior to any construction or ground-disturbing activities.
9. Prior to arriving on site, construction equipment and trailers would be cleaned to remove weed seeds and excess grease, oil, and hydraulic fluid. If construction equipment must be on a wetted surface, runway metal or similar material, would be used to reduce compaction.
10. An appropriate spill response kit would be on site when construction equipment is being used.

F. Project Design for Exclosure Fences (Spring Development and Proposed Action Alternatives)

1. Fences would be installed using standard BLM approved methods.
2. Exclosure fences would be four-strand wire fence built to BLM specifications for fences built in antelope ranges.
3. A small buck and pole exclosure fence would be installed using standard BLM approved methods around Mesteño Spring.
4. Metal livestock panels would be utilized as fence near Yank Springs, Yank Creek or trough locations to help prevent wild horses and livestock from pushing the fences over or down.
5. Gates would be constructed in the exclosure fences to facilitate removal of wild horses or livestock should they get into the exclosure.
6. Gates would be constructed in the new pasture boundary fence to facilitate movement of wild horses and livestock between pastures.

CHAPTER III. AFFECTED ENVIRONMENT

A. Current Resource Conditions

Photographs of Yank Springs and Mesteño Spring were taken to provide some baseline visual information about the project area. The following photographs show the current conditions at each spring location.



Current Conditions at Yank Springs (June 4, 2002)



Current Conditions at Mesteño Spring (June 4, 2002)

1. Critical Elements Not Present or Affected at the Project Site

The following resources are not found in the proposed project area and will not be discussed further in this document: Wilderness, Wilderness Study Areas (WSAs), Wild and Scenic Rivers, minority or economically depressed populations, flood plains, prime farmlands, paleontology or hazardous materials. The proposed action would not result in an adverse energy impact.

2. Area of Critical Environmental Concern

This project is located within the Kiger Mustang ACEC. The primary objective of the ACEC is to perpetuate and protect the dun factor color and conformation characteristics of the wild horses present in the Kiger and Riddle Mountain HMAs. Additionally, educational opportunities will be provided to increase the public's knowledge of wild horses and BLM's land management role and responsibility in managing wild horses.

3. Cultural Heritage

Within the proposed project area are two historic structures recently recorded as cultural sites. One of the sites has a prehistoric component that lies outside the immediate vicinity of the building. This area needs to be avoided if the proposed project is implemented. The remaining proposed project area will require a cultural survey once the impact areas are defined and indicated on the ground.

4. Noxious Weeds

There are 50 known noxious weed sites covering approximately 75 acres in the Smyth-Kiger Allotment. None of these sites are in the proposed project area.

5. Special Status Fauna

Nesting and brood-rearing habitat for Greater sage-grouse (*Centrocercus urophasianus*), a Special Status species, occurs within the proposed project area. One Greater sage-grouse lek is located approximately 3 miles from the proposed project area. Habitat for the Columbia spotted frog (*Rana luteiventris*), a Federal candidate for listing as threatened or endangered, occurs within the proposed project area. No Columbia spotted frogs are known to occur in this habitat but further inventory will take place prior to project implementation. Current riparian conditions provide poor habitat for Greater sage-grouse and Columbia spotted frogs.

Malheur mottled sculpin (*Cottus bairdi*), a Bureau sensitive species, may occur within the proposed project area. This fish is known to exist immediately downstream of the proposed project area in Little Kiger Creek. Unless there are physical barriers to fish movement, species found in Little Kiger Creek are very likely to be found in Yank Creek. No inventory for this species has been conducted in the proposed project area.

Great Basin redband trout (*Oncorhynchus mykiss*), a Bureau tracking species, is known to occur at Yank Springs and downstream of the project area in Little Kiger Creek. No inventory for this species has been conducted in Yank Creek. We suspect that Great Basin redband trout are also in Yank Creek, making for a continuous population from the headwaters at Yank Springs downstream to Little Kiger Creek and beyond.

6. Special Status Flora

There are known sites of short-lobed penstemon (*Penstemon seorsus*) in the project vicinity. This is a Bureau Tracking species on the Oregon Natural Heritage Program list 3.

There are also known sites of Back's sedge (*Carex backii*) in the vicinity. This is a Bureau Assessment species on the Heritage Program list 2 as threatened or endangered in Oregon.

7. Water Quality

Yank Creek is not on the Oregon Department of Environmental Quality's 303(d) list of water quality limited streams. However, due to limited riparian vegetation, stream shading is reduced and sediment retention is limited. These two conditions lead to degraded water quality through higher water temperatures and excessive stream sedimentation.

8. Riparian Conditions

Riparian areas associated with Yank Springs, Yank Creek, and Mesteño Spring have been negatively impacted by livestock and wild horses. Yank Springs Pasture has had 3 years of rest from livestock grazing allowing riparian vegetation to begin to recover. Some of the spring sources are hummocked, indicating trampling by livestock and wild horses.

Yank Creek has continued to be grazed by livestock and wild horses and shows the impacts from grazing, trampling, and soil compaction. Woody riparian vegetation has been impacted to the point that it is "mushroom shaped" and few young woody plants are evident, while herbaceous riparian vegetation is limited in distribution and vigor. Due to limited riparian vegetation, stream shading and sediment retention have been reduced. Reduced stream shading allows increased solar input on the water, leading to higher water temperatures. Reduced sediment retention limits the extent and establishment of riparian vegetation and fills the spaces between stream gravels, limiting the habitat available for some aquatic macroinvertebrates.

Along the margins of Mesteño Spring, riparian vegetation has been eliminated. The interior of the spring supports limited herbaceous riparian vegetation. Also, the wetted spring area is heavily hummocked.

B. Noncritical Elements

1. Range

a. Vegetation

The major upland vegetation types in this area are primarily stiff sagebrush/bluegrass, mountain big sagebrush/bluebunch wheatgrass, and mountain big sagebrush/Idaho fescue which are in fair to good condition.

Meadow areas support sod forming grasses, sedges, and rushes with a woody component consisting of willows and aspen.

b. Soils

General soils are in the Merlin - Observation - Lambring soils group. Fifteen percent of the soils are in a stable erosion condition class, sixty-five percent are in a slight erosion condition class, and twenty percent of the soils are in a moderate erosion condition class.

c. Livestock Management

Yank Creek and Mesteño Spring are in the Yank Springs Pasture while Yank Springs is in the Ruins Pasture. Livestock management in both pastures is a deferred grazing system and takes place between July 1 and October 31.

2. Wildlife

The Smyth-Kiger Allotment supports a diversity of wildlife. There are deer, elk, and pronghorn antelope along with many other species. Unfortunately, current shrub conditions provide poor habitat for species requiring multilayer riparian shrub habitat. Also, heavy utilization levels on herbaceous species result in poor habitat for ground-nesting birds.

3. Recreation and Visual Resources

Recreation values are high within the Smyth-Kiger Allotment due to the wild horse viewing area. Off-Highway Vehicle (OHV) use is limited to existing roads and ways within the ACEC. Recreational opportunities include driving for pleasure, viewing horses, photography, hunting, hiking, fishing, and rock-hounding. The proposed project site is within a VRM Class IV management area. The VRM Class IV management objective provides for management activities which allow for major modification of existing character of the landscape.

4. Fish and Aquatic Resources

Malheur mottled sculpin (*Cottus bairdi*), a Bureau sensitive species, may occur within the proposed project area. This fish is known to exist immediately downstream of the proposed project area in Little Kiger Creek. Unless there are physical barriers to fish movement, species found in Little Kiger Creek are very likely to be found in Yank Creek. No inventory for this species has been conducted in the proposed project area.

Great Basin redband trout (*Oncorhynchus mykiss*), a Bureau tracking species, is known to occur at Yank Springs and downstream of the project area in Little Kiger Creek. No inventory for this species has been conducted in Yank Creek. We suspect that Great Basin redband trout are also in Yank Creek, making for a continuous population from the headwaters at Yank Springs downstream to Little Kiger Creek and beyond. Other fish species that may occur within the project area or downstream include dace (*Rhinichthys sp.*) and mountain whitefish (*Prosopium williamsoni*). Yank Springs, Yank Creek, and Mesteño Spring have not been surveyed for fish or aquatic invertebrates.

5. Wild and Free-Roaming Horses

The proposed project is within the Kiger Wild Horse HMA for Wild and Free-Roaming Horses and within the Kiger Mustang ACEC. Appropriate Management Level (AML) in the Kiger Wild Horse HMA is 51 to 82 horses. The current population, including the 2002 foal crop, is estimated to be 92 horses. The majority of this herd resides in the Yank Springs Pasture. Yank Springs and Yank Creek are critical water sources which provide water for this wild horse herd in both the Yank Springs and Ruins Pastures. Wild horses use the project area on a daily basis.

The Kiger Mustang Overlook was developed in 1990 and is located approximately one-half mile to the north of the project site. The viewpoint has a small parking area and is minimally developed. This viewpoint is a destination for an estimated 500 visitors each summer.

CHAPTER IV. ENVIRONMENTAL CONSEQUENCES

A. No Action Alternative

1. Critical Elements

a. Area of Critical Environmental Concern

The No Action Alternative would not affect the physical characteristics of the horses in this area.

b. Cultural Heritage

Two recorded cultural sites within the proposed project area would not be affected beyond current levels. Continued livestock and wild horse rubbing is the most likely impact.

c. Noxious Weeds

The No Action Alternative would not affect the spread of noxious weeds in the proposed project area.

d. Special Status Fauna

The No Action Alternative would maintain the poor condition habitat for Greater sage-grouse and Columbian spotted frogs.

There would be no improvement in riparian or aquatic habitat conditions or water quality under current management to Great Basin redband trout or to downstream populations of Malheur mottled sculpin.

e. Special Status Flora

Back's sedge is a riparian species. If riparian conditions continue to be degraded, potential sedge habitat would also be degraded. A decline in the quality of upland vegetation would adversely affect the penstemon.

f. Water Quality

Wild horses and livestock would continue to degrade water quality. Impacts include continued trampling of riparian areas, resulting in reduced riparian vegetation, hummocking, and soil compaction, leading to increased water temperatures, increased evaporation rates, reduced water infiltration into the soil, and an overall reduction of water quality.

g. Riparian Conditions

Wild horses and livestock would continue to degrade riparian areas. Impacts include trampling of riparian areas, resulting in reduced riparian vegetation, hummocking, and soil compaction, leading to increased water temperatures, increased evaporation rates, reduced water infiltration into the soil, and an overall reduction of riparian habitat and quality.

2. Noncritical Elements

a. Range

(1) Vegetation

Upland and riparian vegetation would continue to decline in vigor, density, and percent cover with continual yearlong grazing by wild horses and annual deferred grazing by livestock in the area adjacent to the springs and creek.

(2) Soils

Soils would become more susceptible to erosion with less vegetative cover due to concentrated use by horses and livestock.

(3) Livestock Management

Yank Springs and Ruins Pastures would continue to be managed under a deferred rotation grazing system. There would be continued livestock impacts on the uplands and riparian areas.

b. Wildlife

The current poor habitat conditions for riparian shrub dependent species and ground-nesting birds would be maintained under the No Action Alternative.

c. Recreation and Visual Resources

Recreation and VRM would remain the same. There would be no changes in recreational opportunities or visual resources.

d. Fish and Aquatic Resources

Aquatic habitat would continue to degrade with use by horses and livestock in the area of the springs and creek, negatively impacting fish and aquatic resources. As conditions continue to degrade, species richness and composition would decline.

e. Wild and Free-Roaming Horses

The Kiger horse herd would continue to frequent the springs and creek and to use them as water sources. No impacts to wild horses should occur under the No Action Alternative.

B. Spring Development Alternative

1. Critical Elements

a. Area of Critical Environmental Concern

The Spring Development Alternative would have no impact on the physical characteristics of the horses in this area. It would contribute to overall improvement of the HMA.

b. Cultural Heritage

Within the proposed project area are two historic structures that have been recently recorded as cultural sites. One of the sites has a prehistoric component that lies outside the immediate vicinity of the building. This area needs to be avoided if the proposed project is implemented. The remaining proposed project area will require a cultural survey once the impact areas are defined and indicated on the ground. Any mitigation measures would be determined after a cultural inventory of the proposed project area had been taken.

c. Noxious Weeds

If there are noxious weeds in the vicinity of the proposed project or if noxious weed seeds are brought into the area via construction equipment and animal use at watering sites, the ground disturbance associated with the construction of the proposed project could lead to the introduction of noxious weeds. Mitigation measures would be used to minimize impacts of weed introductions to the project area.

d. Special Status Fauna

Under the Spring Development Alternative, habitat for Greater sage-grouse brood-rearing would improve to good within approximately 3 years then slowly decline as herbaceous vegetation became lodged and matted in the exclosure areas. Habitat for Columbia spotted frogs would improve slowly but would not become good in the foreseeable future due to the lack of off channel pools.

Riparian and aquatic habitat conditions and water quality would improve within the proposed project area. Improved riparian and aquatic habitat conditions and water quality would benefit populations of Malheur mottled sculpin which are known to exist downstream in Little Kiger Creek and Great Basin redband trout at Yank Springs and below through decreases in both water temperature and in-stream sediment.

Developing Yank Springs would reduce the amount of available water below the point of diversion. However, Yank Springs is a relatively large spring complex and water not consumed from the troughs by animals would be piped back to Yank Creek, thus the impact to Special Status aquatic species downstream is expected to be negligible or nonexistent.

However, impacts of spring development and removal of water from the spring may reduce available habitat for Great Basin redband trout known to exist at Yank Springs. The area impacted by spring development would be between the spring headbox and the pipe that would return unused water from the trough back to Yank Creek.

e. Special Status Flora

If Back's sedge occurs in the area impacted by construction of the spring development, the impacts would be detrimental due to damage to the plants. This could be mitigated through avoidance. If Back's sedge occurs within the exclosures, this alternative would have a positive impact due to habitat protection and improvement.

f. Water Quality

Developing Yank Springs would reduce the amount of available water below the point of diversion, potentially reducing water quality. However, Yank Springs is a relatively large spring complex and water not consumed from the troughs by animals would be piped back to Yank Creek. Water returning to the creek from the trough may be warmer than the water in the creek. This increase in temperature at the return point may impact water quality downstream of the project site.

The fences proposed in this alternative would have positive effects on water quality at both springs and in the creek by eliminating trampling by livestock and wild horses and allowing riparian areas to recover. Properly functioning riparian areas would benefit water quality in the springs and creek by reducing water temperatures, reducing soil compaction, limiting movement of fine sediment into the water and increasing water storage.

g. Riparian Conditions

The impacts to riparian conditions would be similar to those described for water quality.

2. Noncritical Elements

a. Range

(1) Vegetation

Riparian and upland vegetation within the enclosure would gain vigor while improving in structure and species diversity. Upland vegetation outside of the enclosure near the springs would continue to be heavily utilized.

(2) Soils

Soils within the enclosure should improve in soil surface factor and structure with increased cover and a reduction in compaction and trampling.

(3) Livestock Management

Livestock are likely to congregate at the trough locations. The area around the troughs would likely be heavily trampled. The Yank Creek and Mesteño Spring enclosures would be closed to livestock grazing. Livestock management would be under a deferred rotation grazing system for the Yank Springs and Ruins Pastures.

b. Wildlife

Habitat for ground-nesting birds within the enclosures would improve to good quality within approximately 3 years and remain good into the future. Habitat for species requiring riparian shrubs would improve slowly and reach good condition in 15 to 20 years.

c. Recreation and Visual Resources

Both recreation and visual resource opportunities usually are enhanced with enclosures due to better management and improvement in riparian and upland conditions. However, in this case the recreational opportunities at the Kiger viewing area are high and additional fencing will reduce the opportunities to view the Kiger mustangs.

Fences proposed under this alternative are allowed under the current VRM Class IV. The fencing will reduce recreational opportunities to view horses.

d. Fish and Aquatic Resources

The impacts to fish and aquatic resources would be similar to those described for water quality.

e. Wild and Free-Roaming Horses

The proposed water development would continue to provide wild horse drinking water at the same location that water has always been available to wild horses. General wild horse distribution patterns would not change. Approximately 250 acres would not be available to wild horses due to the addition of two exclosures. The size of the excluded area is not significant and would not require a change in the wild horse AML.

Viewing opportunities of the Kiger mustangs from the Kiger viewpoint will be negatively affected by this alternative. The Mesteño Spring exclosure fence and a portion of the Yank Springs exclosure fence are in direct view from the Kiger viewpoint. The largest negative impact is that the Mesteño Spring exclosure fence would remove an area that is frequented by wild horses. Horses tend to linger in this area to graze the meadow during the spring of the year. The exclosure would reduce opportunities to see horses in this area from the viewpoint.

C. Proposed Action Alternative

1. Critical Elements

a. Area of Critical Environmental Concern

The Proposed Action Alternative would have no impact on the physical characteristics of the horses in this area. It would contribute to overall improvement of the HMA.

b. Cultural Heritage

Within the proposed project area are two historic structures that have been recently recorded as cultural sites. One of the sites has a prehistoric component that lies outside the immediate vicinity of the building. This area needs to be avoided if the proposed project is implemented. The remaining proposed project area will require a cultural survey once the impact areas are defined and indicated on the ground. Any mitigation measures would be determined after a cultural inventory of the proposed project area had been taken.

c. Noxious Weeds

If there are noxious weeds in the vicinity of the proposed project or if noxious weed seeds are brought into the area via construction equipment and animal use at watering sites, the ground disturbance associated with the construction of the proposed project could lead to the introduction of noxious weeds. Mitigation measures would be used to minimize impacts of weed introductions to the project area.

d. Special Status Fauna

Under the Proposed Action Alternative, habitat for Greater sage-grouse brood-rearing would improve to good within approximately 3 years then slowly decline as herbaceous vegetation became lodged and matted in the enclosure areas. Habitat for Columbia spotted frogs would improve slowly but would not become good in the foreseeable future due to the lack of off channel pools.

Riparian and aquatic habitat conditions and water quality would improve within the proposed project area. Improved riparian and aquatic habitat conditions and improved water quality would benefit populations of Malheur mottled sculpin, known to exist downstream in Little Kiger Creek, and Great Basin redband trout, known to exist in Yank Springs and in Little Kiger Creek, through decreases in water temperature and instream sediment.

The proposed alternative would concentrate wild horses and livestock into two small water gaps on Yank Creek where free running water will remain available. The water gap area would be heavily impacted causing soil compaction and vegetation removal from grazing and trampling. The streambanks within the water gaps would receive damage from hoof action. During rain events or snowmelt, sediment would flow unimpeded into the stream at the water gaps because there would be no vegetation to trap the sediment and infiltration would be limited due to soil compaction. Although sediment movement will occur from the water gap areas, the degree of movement will be of a lesser scale than with the No Action Alternative.

e. Special Status Flora

If Back's sedge occurs in the area impacted by construction of the spring development, the impacts would be detrimental due to damage to the plants. This could be mitigated through avoidance. If Back's sedge occurs within the exclosures, this alternative would have a positive impact due to habitat protection and improvement.

f. Water Quality

The exclosures proposed in this alternative would prevent wild horses and livestock from further degrading water quality at both springs and in the creek by reducing trampling and soil compaction and allowing riparian vegetation to establish and increase inside the excluded area. The resulting healthy riparian areas would reduce solar input to the water, reduce soil compaction, limit fine sediment movement into the stream, and increase water storage.

Heavy trampling, soil compaction, sediment transport into the stream, and loss of vegetation would occur within the water gap areas. Rain and snowmelt events would create sediment flow into the stream where there would be no vegetation to filter it out prior to entering the stream. This would occur on a small portion of the project area. The remaining area would be excluded and, as addressed above, would have positive affects on water quality.

g. Riparian Conditions

The impacts to riparian conditions would be similar to those described for water quality.

2. Noncritical Elements

a. Range

(1) Vegetation

Vegetation within the exclosure would gain vigor while improving in structure and species diversity. Upland vegetation outside of the exclosure near the springs would continue to be heavily utilized.

(2) Soils

Soils within the exclosures should improve in soil surface factor and structure with increased cover and a reduction in compaction and trampling.

(3) Livestock Management

The Yank Creek and Mesteño Spring exclosures would be closed to livestock grazing. Livestock management in the Yank Springs and Ruins Pastures would be changed to a deferred rotation grazing system.

b. Wildlife

Habitat for ground-nesting birds within the exclosures would improve to good quality within approximately 3 years and remain good into the future. Habitat for species requiring riparian shrubs would improve slowly and reach good condition in 15 to 20 years.

c. Recreation and Visual Resources

Fencing the springs will have an immediate negative impact on viewing opportunities from the Kiger viewing area only if there is a reduction in the number of wild horses using the area. Initially, it can be expected that this will happen. Over the long term the wild horses should become accustomed to the fences and use the area in a manner and degree similar to that prior to project construction.

Improvement of the riparian and upland areas within the exclosures will benefit wildlife species that use the area. Both recreation and visual resource opportunities would also improve within the exclosures. VRM Class IV management allows the fence to dominate the view shed. Mesteño Spring will be fenced with a wooden buck and pole fence to improve the visual affects of the project.

d. Fish and Aquatic Resources

The impacts to fish and aquatic resources would be similar to those described for water quality.

e. Wild and Free-Roaming Horses

The proposed water gaps would continue to provide wild horse drinking water at the same location that water has always been available to wild horses. Wild horse distribution patterns would not change.

Approximately 250 acres would not be available to wild horses due to construction of the exclosures. The size of the excluded area is not significant and would not require a change in the wild horse AML.

The fence design would incorporate metal livestock panels near Yank Springs and at the water gap locations on Yank Creek where both cattle and wild horses will congregate. Metal livestock panels would require less maintenance than a wire fence and would prevent injuries to horses that may fight at water gap locations. A wooden buck and pole fence would be constructed around Mesteño Spring.

Horses may occasionally get into the Yank Springs exclosure due to gates being left open or fence being down. Wild horses are not easily removed from exclosures. Removal may not take place until the next wild horse gather which could be several years after initial entry. This may compromise progress toward riparian management objectives inside the exclosure during that time period.

3. Cumulative Effects

Improvement in riparian conditions will occur if exclosures are created at the project site. Although the exclosures are relatively small in size, their relative importance to the area is large. Any improvement in riparian conditions will have an overall positive cumulative affect.

There are no known potential negative cumulative effects anticipated as a result of implementing the Proposed Action, the Spring Development, or the No Action Alternatives.

CHAPTER V. REFERENCES

Bureau of Land Management. 1992. Three Rivers Resource Area Management Plan/Record of Decision.

Bureau of Land Management. 1996. Riddle Mountain and Kiger Wild Horse Herd Management Area Plan. 8 pp + Appendices.

Bureau of Land Management. 1996. Kiger Mustang Area of Critical Environmental Concern Management Plan. 3 pp.

Bureau of Land Management. 1997. Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Public Lands Administered by the Bureau of Land Management in the States of Oregon and Washington. 22 pp.

CHAPTER VI. CONSULTATION AND COORDINATION

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CHAPTER VIII. APPENDICES

Appendix 1, Maps A-E

Map A	General Location Map
Map B	Kiger Herd Management Area and Kiger Area of Critical Environmental Concern Map
Map C	No Action Alternative
Map D	Spring Development Alternative
Map E	Proposed Action Alternative